



ELECTRICAL SPECIFICATIONS

Antenna Model	VFP69383B22JN-518J					
Number of Ports	5					
Port Configuration	2x- 3G/4G/ISM/CBRS			2x - WiFi		
Frequency Bands, MHz	698- 806	824- 894	880- 960	1690-3800	2400-2500	4900- 6000
Peak Gain(*), Avg. dBi	0.4	0.8	1.2	4.0	2.6	6.6
Peak Gain(*), Max. dBi	1.6	1.4	1.5	7.2	3.1	7.5
VSWR (**), Avg	1.7:1	1.8:1	1.9:1	1.5:1	1.5:1	1.2:1
VSWR (**), Max	2.5:1	2.1:1	2.2:1	2.1:1	2.0:1	
Isolation LTE1 to LTE2 (dB)	-11	-13	-14	-18	-24	-33
Isolation LTE1 to WIFI 1 (dB)	-36	-37	-39	-14	-14	-32
Isolation LTE1 to WIFI 2 (dB)	-39	-38	-38	-14	-14	-35
Isolation LTE2 to WFI 1 (dB)	-39	-42	-40	-14	-14	-32
Isolation LTE2 to WIFI 2 (dB)	-34	-36	-38	-14	-14	-33
Isolation WIFI 1 to WIFI 2 (dB)	-74	-75	-71	-30	-30	-38
Isolation GNSS to LTE 1 (dB)	-68	-69	-71	-52	-55	-52
Isolation GNSS to LTE 2 (dB)	-43	-41	-41	-46	-51	-54
Isolation GNSS to WIFI 1 (dB)	-65	-68	-71	-47	-47	-52
Isolation GNSS to WIFI 2 (dB)	-68	-69	-71	-52	-55	-52
Azimuth 3 dB Beamwidth	360°, Omnidirectional					
Nominal Impedance	50 Ω					
Polarization	Linear Vertical					
Max Power/port- Ambient 25°C (W)	30			10		

MECHANICAL SPECIFICATIONS

Dimensions- L x W x H mm (inches)	179 x 63 x 48 mm (7.04 x 2.48 x 1.69)
Weight, kg (lbs)	1.1 kg (2.42 lbs)
Mounting	P- Mount
Cable Type/Length m (ft)	LMR 100- Black/0.3 (1) pigtails, LMR 195- Black/4.9 (16) jumper cables
Color	Black
Radome Material	PC, UL94-V0
Baseplate Material	Aluminum

ENVIRONMENTAL SPECIFICATIONS

Operating Environment	Outdoor Vehicle
Operating Temperature, °C (°F)	-30 to +70 (-22 to +158)
Storage Temperature, °C (°F)	-40 to +85 (-40 to +185)
Ingress Protection	IP67
Rail Compliance Standards	EN61373 (Shock & Vibration), EN50155 (Temperature)
Material Substance Compliance	RoHS Compliant

Notes:

- (*) This parameters is based on 1ft cable length & 1ft ground plane.
- (**) This parameters is based on 17ft cable length & 1ft ground plane.
- Antenna specification is subjected to change according to the ground plane size.

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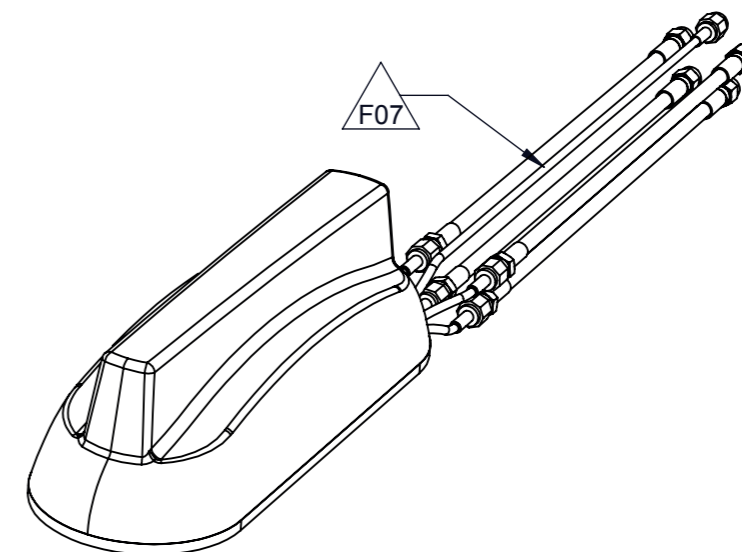
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REVISIONS

REV.	ECN#	ZONE	DESCRIPTION	CHANGED BY/DATE	APPROVED BY/DATE
F02			ADD DRAWING NOTES; ADD SHEET 2 FOR GNSS SPECIFICATION	YS TAN 30APR19	WT NG 30APR19
F03			REVISED PARAMETER TABLE	YS TAN 07MAY19	WT NG 07MAY19
F04	ECO-19-00228		REVISED PARAMETER TABLE; ADD MOUNTING STUD HEIGHT	YS TAN 21MAY19	WT NG 21MAY19
F05			REVISED SPEC TABLE; ADD JUMPER CABLE ASSEMBLY	YS TAN 12AUG20	WT NG 12AUG20
F06	ECO-20-00411		REVISED GNSS PIGTAILS CABLE LENGTH	YS TAN 13AUG20	WT NG 13AUG20
F07	ECO-21-00002		UPDATED ANTENNA VIEW	YS TAN 05JAN21	YS TAN 05JAN21



GNSS ANTENNA SPECIFICATIONS

Frequency of Operation (MHz)	1559 - 1606		
Band	BEIDOU	GPS	GLONASS
Frequency Band (MHz)	1559.052 - 1563.144	1574.42 - 1576.42	1598.0625 - 1605.89
Absolute Gain (dBi)	2	2	2
LNA Gain Typ. @ room temp. (dBi)	28 ± 3		
Noise Figure @ room temp., Max (dB)	≤ 2.5 @ 1575 MHz		
Max VSWR @ room temp.	2.5:1		
Polarization	RHCP		
Nominal Impedance	50 Ω		
DC Voltage (Vdc)	2.5 - 7.0		
Current Consumption, Max @ room temp mA)	8.5 ± 3 @ 3.0V		
ESD, kV	± 2 (contact discharge) / ± 4 (air discharge)		
Out-of-band Signal Rejection Min @ room temp (dBc)	80 (@698-960MHz)	80 (@1428-2700 MHz)	70 (@4900-5800 MHz)
Input Max Power (dBm)	-10		
Cable Type	RG174, Black		

MATERIAL: N/A

FINISH: N/A

THIRD ANGLE PROJECTION



DO NOT SCALE DRAWING

APPROVALS		DATE
DRAWN BY	YS TAN	25APR19
ELEC. ENG.	TH LEE	25APR19
MECH. ENG.	YS TAN	25APR19
MFG./OPS.	HE KHOR	25APR19

INTERPRET DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-2009
TOLERANCES UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS

ANGLE:
0 PLACE DECIMAL: ±30'
1 PLACE DECIMAL: ±0.5
2 PLACE DECIMAL: ±0.25
SURFACE ROUGHNESS 1.6/√



TITLE:

VFP69383B22JN-518J

SIZE

A3

DWG. NO.

VFP69383B22JN-518JMO

REV

F07

SCALE: 1:2

PREVIOUS#

SHEET 1 OF 2

6

5

4

3

2

1

D

D

C

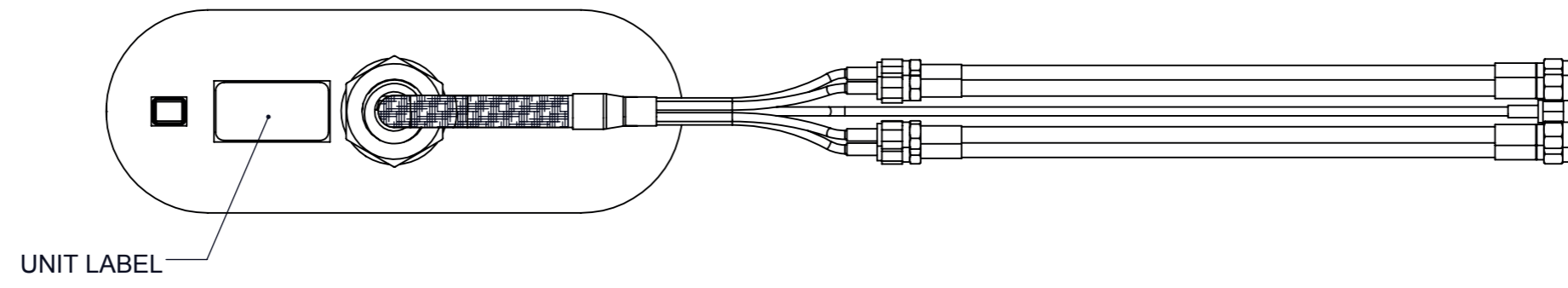
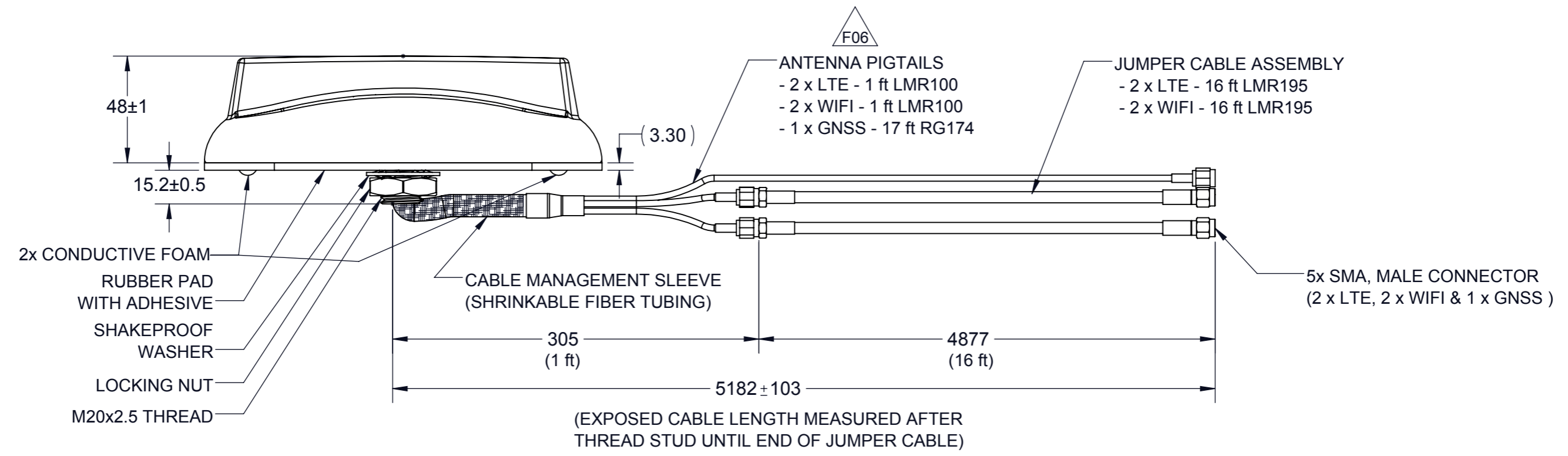
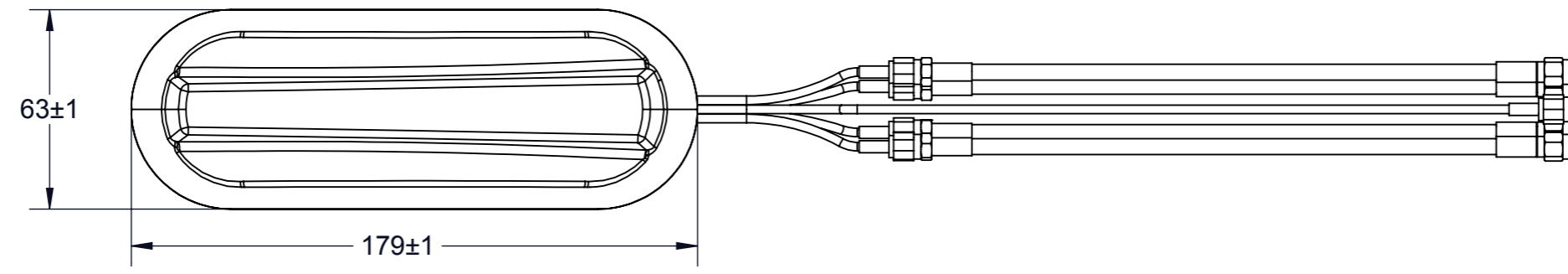
C

B

B

A

A



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SIZE	DWG. NO.	REV
A3	VFP69383B22JN-518JMO	F07
SCALE: 1:2	PREVIOUS#	SHEET 2 OF 2

6

5

4

3

2

1